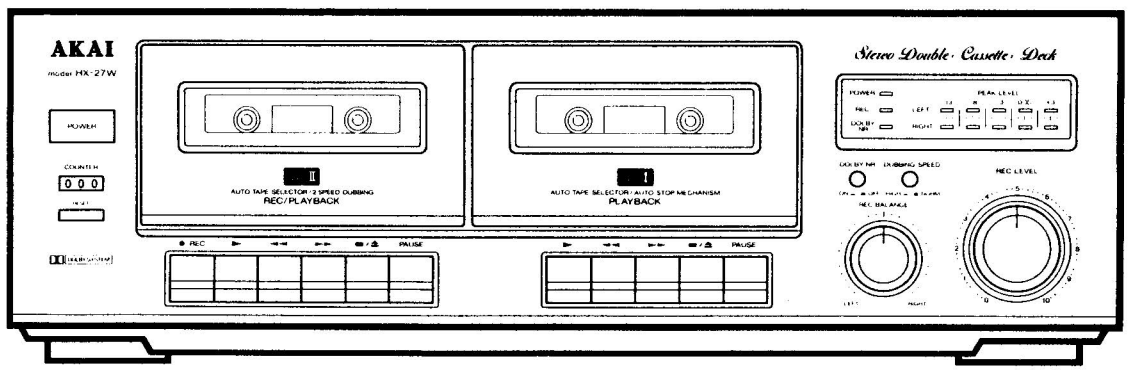
AKAI SERVICE MANUAL



STEREO DOUBLE CASSETTE DECK

MODEL HX-27W

SPECIFICATIONS

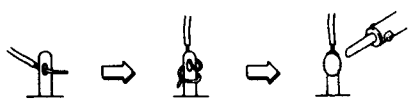
Heads	
Tape I deck	Hard permalloy head for playback x 1
Tape II deck	Hard permalloy head for recording & playback x 1
	Erase head x 1
Motors	DC motor x 2
Wow & flutter	0.2 % (DIN)
Frequency response	
NORMAL	40 Hz to 12,500 Hz ±3 dB
CrO2	40 Hz to 13,000 Hz ±3 dB
Metal	40 Hz to 14,000 Hz ±3 dB
S/N ratio	53 dB (Metal tape)
T.H.D	1.5 % (Normal tape)
Input sensitivity / impedance	80 mV / 47 kohms
Output Level	500 mV
Power requirements	AC220 to 230 V, 50 Hz for Europe except UK
	AC240 V, 50 Hz for UK and Australia
Dimensions	425 (W) x 135 (H) x 275 (D) mm
Weight	3.5 kg
Standard accessories	
Connection cord	RCA pin cord x 2
Operator's manual	x 1

* For improvement purposes,specifications and design are subject to change without notice.
* Noise reduction manufactured under license from dolby laboratories licensing corporation.
"DOLBY"and DD symbol are trade marks of dolby licensing corporation.

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts indentified by the ! (*) symbol are critical for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resister of 1500 ohms paralleled with a 0.15 μF capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 Mohms.

★INFORMATION

SYMBOLS FOR PRIMARY DESTINATION

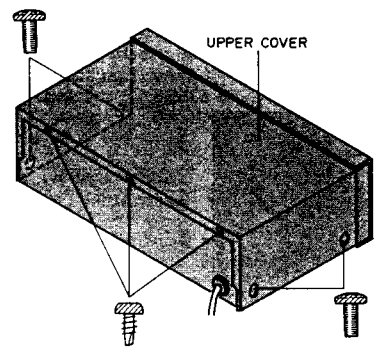
Alphabet indicates the destination of the units as listed below.

Symbols	Principal Destinations
B	UK
E	Europe (except UK)
S	Australia
V	Germany
U	Universal Area
Y*	Custom version

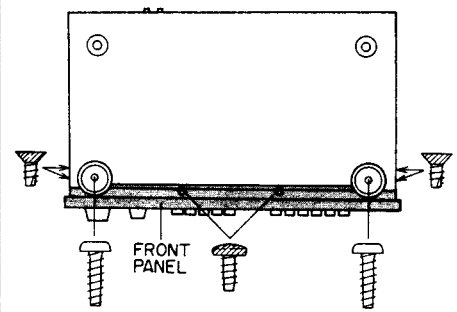
I. DISASSEMBLY

In case of trouble, etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in reverse order.

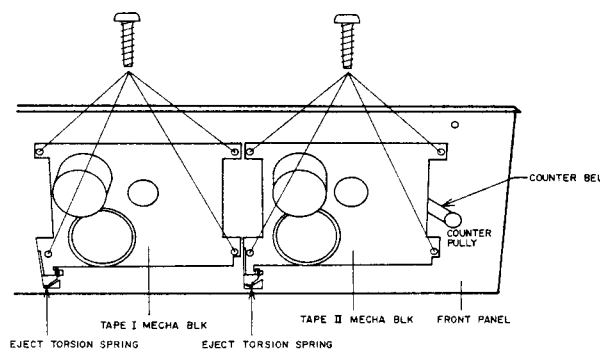
1. Removal of the UPPER COVER



2. Removal of the FRONT PANEL BLOCK



3. Removal of the MECHA. BLOCK



1) TAPE I MECHA BLOCK
   Unhook the EJECT TORTION SPRING, then remove the four fixation screws.
2) TAPE II MECHA BLOCK
   Unhook the EJECT TORSION SPRING and take off the COUNTER BELT from the COUNTER PULLY, then remove the four fixation screws.

II. PRINCIPAL PARTS LOCATION

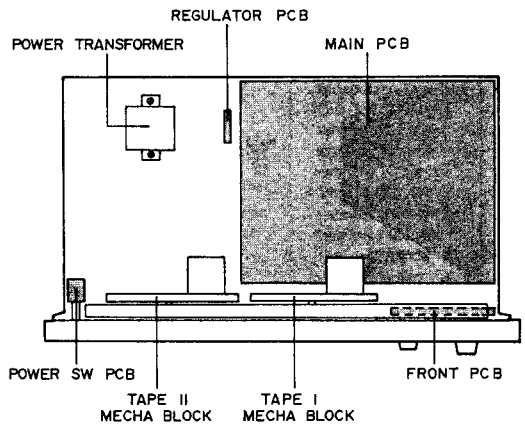


Fig. 2-1 Top view

III. ADJUSTMENT

[PRECAUTIONS BEFORE ADJUSTMENT]

1. Before adjustment, clean and de-magnetize the heads and tape guides.
2. Set the switches and control knobs as follows.
   - REC LEVEL control : Maximum (10) position
   - REC BALANCE control : Center (click) position
   - Dolby NR switch : OFF
3. Use the following recording test tapes.
   - NORMAL position : MAXELL UD1 60
   - CrO2 position : TDK SA 60
   - METAL position : TDK MA 60
4. 0 dBs = 0.775 V

STEP	ADJUSTMENT ITEM
1.	TEST TAPE / INPUT SIGNAL
2.	MODE
3.	TEST POINT, ADJUSTMENT PART
4.	REMARKS (•) and RESULT (*)

ADJ.part →

9 TAPE II METAL POSITION BIAS
1. 400 Hz and 12.5 kHz, -25 dBs (LINE OUT)
2. REC → PLAY (PB)
3. LINE OUT, VR502 (L-ch) / VR501 (R-ch)
4. •Connect an AC milli-voltmeter to LINE OUT.
   *Playback levels of 400 Hz and 12.5kHz are equal or within ±1.0 dB

5 HEAD AZIMUTH ALIGMENT (TAPE I & II)
1. 10 kHz, -15 VU test tape (AT-750778)
2. PLAY
3. LINE OUT, HEAD AZIMUTH ALIGMENT SCREW
4. •Connect an AC milli-voltmeter to LINE OUT.
   *Maximum output level.

12 TAPE II REC LEVEL
1. NORMAL tape, 1 kHz, -6.5 dBs (LINE OUT)
2. REC → PLAY (PB)
3. LINE OUT, VR401 (L-ch) / VR402 (R-ch)
4. •Connect an AC milli-voltmeter to LINE OUT.
   *-6.5dBs

7 TAPE II PB LEVEL
1. 315 Hz test tape (AT-750773)
2. PLAY
3. LINE OUT, VR201 (L-ch) / VR202 (R-ch)
4. •Connect an AC milli-voltmeter to LINE OUT.
   *-6.5 dBs

11 TAPE II CrO2 POSITION BIAS
1. 400 Hz and 12.5 kHz, -25 dBs (LINE OUT)
2. REC → PLAY (PB)
3. LINE OUT, VR503 (L & R-ch)
4. •Connect an AC milli-voltmeter to LINE OUT.
   *Playback levels of 400 Hz and 12.5 kHz are equal or within ±1.0 dB

6 TAPE I PB LEVEL
1. 315 Hz test tape (AT-750773)
2. PLAY
3. LINE OUT, VR101 (L-ch) / VR102 (R-ch)
4. •Connect an AC milli-voltmeter to LINE OUT.
   *-6.5 dBs

10 TAPE II NORMAL POSITION BIAS
1. 400 Hz and 12.5 kHz, -25 dBs (LINE OUT)
2. REC → PLAY (PB)
3. LINE OUT, VR504 (L & R-ch)
4. •Connect an AC milli-voltmeter to LINE OUT.
   *Playback levels of 400 Hz and 12.5 kHz are equal or within ±1.0 dB

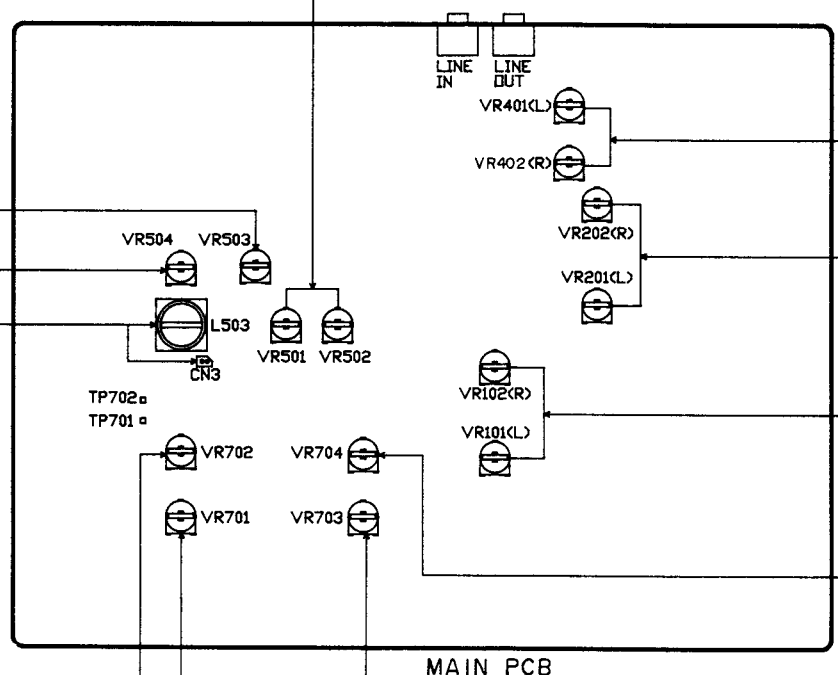
2 TAPE I NORMAL TAPE SPEED
1. 3150 Hz test tape (AT-751263)
2. PLAY
3. LINE OUT, VR704
4. •Connect a frequency counter to LINE OUT.
   *3,150 ±10 Hz

8 OSC FREQUENCY (TAPE II REC / PB only)
1. No signal input, METAL recording test tape.
2. REC
3. TP702 (GND) and CN3 white wire, L503
4. •Connect a frequency counter between TP702 (GND) and CN3.
   *105±0.5 kHz

4 TAPE II NORMAL TAPE SPEED
1. 3,150 Hz test tape (AT-751263)
2. PLAY
3. LINE OUT, VR702
4. •Connect a frequency counter to LINE OUT.
   *3,150 ±10 Hz

3 TAPE II HIGH (x2) TAPE SPEED
1. 3,150 Hz test tape (AT-751263)
2. PLAY
3. LINE OUT, VR701
4. •Connect a frequency counter to LINE OUT and connect between TP701 and TP702 to set the X2 tape speed.
   *6,300 ±10 Hz

1 TAPE I HIGH (x2) TAPE SPEED
1. 3,150Hz test tape (AT-751263)
2. PLAY
3. LINE OUT, VR703
4. •Connect a frequency counter to LINE OUT and connect between TP701 and TP702 to set the X2 tape speed.
   *6,300 ±10 Hz



IV. PARTS LIST

ATTENTION

1. **When placing an order for parts, be sure to list Part No., Model No. and the description of eachpart. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.**
2. **Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.**
3. **Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.**

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-336399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-336397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] : AAL (U.S.A) [S] : SAA (Australia)
[B] : BEAB (England) [U] : U/T (Universal Area)
[C] : CSA (Canada)
[E] : CEE (Europe) [V] : VDE (W. Germany)
[J] : JPN (Japan) [Y] : Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1.RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

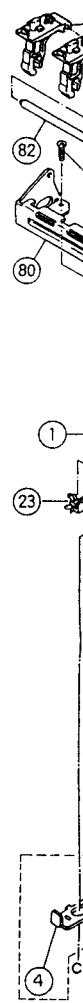
Ref.No.	Part No.	Description
1	BB-735037K	MECHA BLK TN-21ZSC-902(R/P)
2	BB-735038K	MECHA BLK TN-21ZSC-903 (P)
3	BL-726981J	PINCH ROLLER ARM ASSY
4	BM-729992J	MOTOR EG-530KD-2B
5	*BT-735035K	TRANS POW A48-079Y-V HX-27W(E) [E]
6	*BT-735036K	TRANS POW A48-079Z-B HX-27W(B) [B,S]
7	ED-735135K	D LED DLG-302T
8	ED-735134K	D LED DLR-302T
9	ED-624903	D SILICON H 1S2473
10	ED-511907	D SILICON 1N4002 100/1.0A
11	EI-717989	IC CXA1011P
12	EI-735040K	IC KA2281
13	EI-735039K	IC KIA7325P
14	EI-213390	IC NJM4558D
15	EI-375441	IC NJM78M12A
16	EI-381687J	IC UPC1330HA
17	ER-325381	R FUSE H RF25SJ 1/4W 2R2J
18	ER-348272	R FUSE H S10 ERD2FC 1/4W 12R0G
19	ES-726521J	SW LEAF MSW-1275 [TAPE 2]
20	ES-726489J	SW LEAF MSW-1541T
21	ES-731245J	SW LEAF MSW-1782MVDO
22	*ES-735015K	SW PUSH SDL-1P [POWER SW]
23	ES-735136K	SW PUSH 00220014 2C2P [DUBBING]
24	ET-728750K	TR KTA1015 GR
25	ET-728672K	TR KTA950 Y
26	ET-728746K	TR KTC1815 GR
27	ET-726419K	TR KTC2120 Y
28	ET-735023K	TR KTC2878 B
29	HE-729254J	HEAD E LE15A-C1 [TAPE 2]
30	HR-732431M	HEAD RP MS15R-AA2N4
31	MB-721445	BELT MAIN
32	MB-726984J	BELT RF

2. MECHA BLOCK

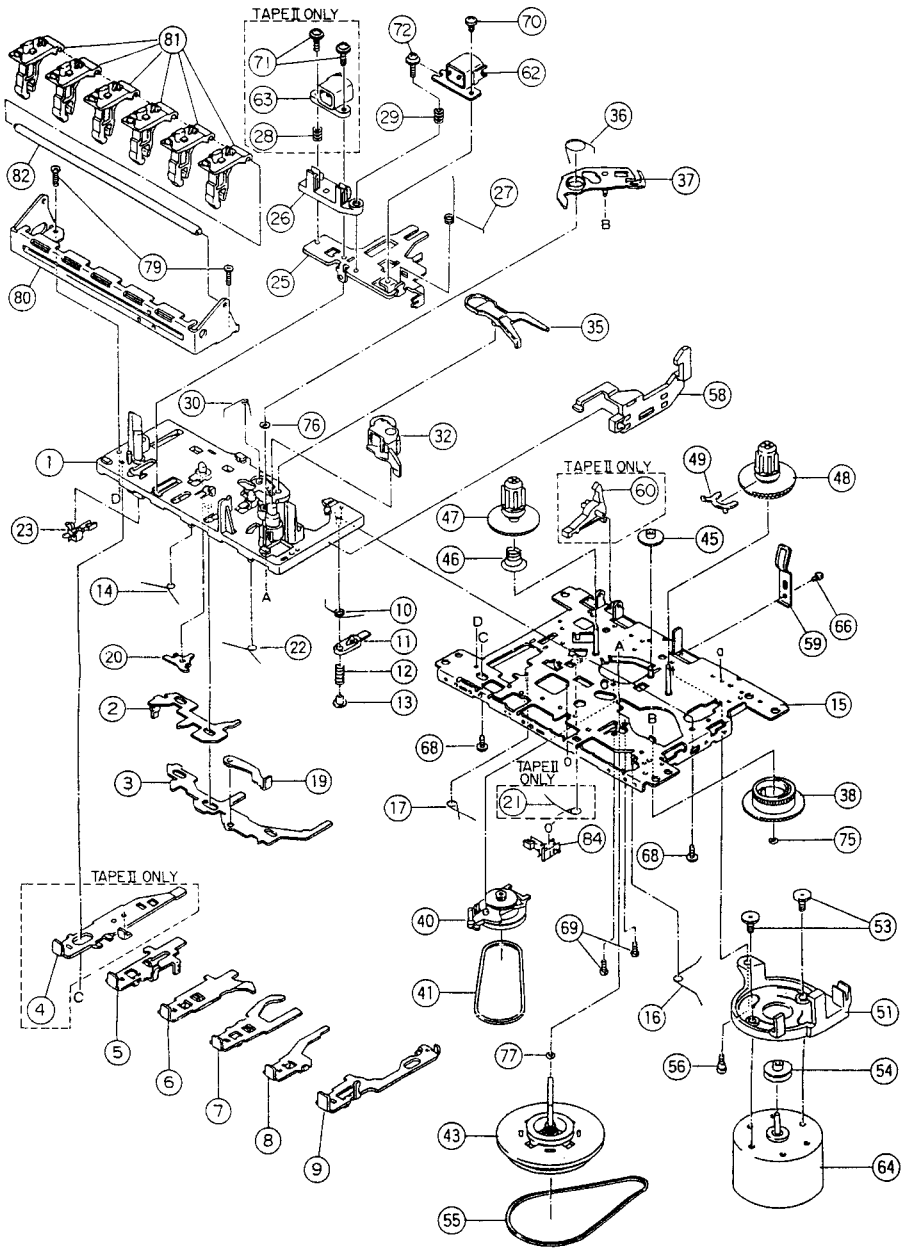
Ref.No.	Part No.	Description
3	ML-726967J	PUSH BUTTON ACTUATOR
10	ZG-727093J	SP P CONTROL [TAPE 2]
11A	ML-727094J	LEVER PAUSE [TAPE 2]
11B	ML-726969J	LEVER PAUSE [TAPE 1]
12	ZG-726970J	SP PAUSE LEVER
13	MZ-726971J	PAUSE STOPPER
20	MZ-726974J	PR STOPPER
23	ES-726489J	SW LEAF MSW-1541T
24	ES-726521J	SW LEAF MSW-1275 [TAPE 2]
26A	HZ-726976J	HEAD BASE REC/PB [TAPE 2]
26B	HZ-726977J	HEAD BASE PB [TAPE 1]
27	ZG-726979J	SP PANEL
28	ZG-717782	SP EH [TAPE 2]
29	ZG-717786	SP AZIMUTH
32	BL-726981J	PINCH ROLLER ARM ASSY
35	ML-726982J	LEVER SENSING [TAPE 2]
36	ZG-726987J	SP GEAR PLATE [TAPE 2]
37	BL-726988J	GEAR PLATE ASSY
38	MZ-726989J	GEAR CAM
40	BZ-727285J	RF CLUTCH ASSY
41	MB-726984J	BELT RF
43	BF-726986J	FLYWHEEL ASSY 303
45	MZ-725793J	GEAR FF
46	ZG-726508J	SP BACK TENSION
47	BR-727095J	SUPPLY REEL ASSY 304
48	BR-727096J	TAKE-UP REEL ASSY 303
49	MZ-726993J	SENSER
54	MR-727799J	PULLEY MOTOR
55	MB-721445	BELT MAIN
58	ML-729253J	LEVER EJECT SLIDE
59	SP-726512J	SP CASSETTE PACK
60	ML-726507J	LEVER REC SAFETY [TAPE 2]
62	HR-732431M	HEAD RP MS15R-AA2N4
63	HE-729254J	HEAD E LE15A-C1 [TAPE 2]
64	BM-729992J	MOTOR EG-530KD-2B
70	ZS-726999J	SCREW BIND M2X3
71	ZS-726515J	SCREW M2X8
72	ZS-717809	SCREW AZIMUTH
75	ZW-727002J	P WASHER CUT 1.2X3.8X0.3
76	ZW-727003J	P WASHER CUT 1.45X3.8X0.5
77	ZW-721971J	PW2X3.5X0.3
81	ML-717811	LEVER OPERATION
88	ES-731245J	SW LEAF MSW-1782MVDO

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MECHA



MECHA BLOCK


TAPE II ONLY
TAPE II ONLY
TAPE II ONLY
TAPE II ONLY
TAPE II ONLY
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TAPE II ONLY
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68
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69
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3. P.C BOARD BLOCK

Ref.No.	Part No.	Description
1	BA-735150K	MAIN PCB ASSY HX-27W

4. MAIN P.C BOARD

Ref.No.	Part No.	Description
C506	EC-735046K	C STY 822J 125V
D501	ED-624903	D SILICON H 1S2473
D502	ED-624903	D SILICON H 1S2473
D503	ED-624903	D SILICON H 1S2473
D504	ED-624903	D SILICON H 1S2473
D505	ED-624903	D SILICON H 1S2473
D506	ED-624903	D SILICON H 1S2473
D701	ED-624903	D SILICON H 1S2473
D702	ED-624903	D SILICON H 1S2473
D703	ED-624903	D SILICON H 1S2473
D704	ED-624903	D SILICON H 1S2473
D705	ED-624903	D SILICON H 1S2473
D706	ED-624903	D SILICON H 1S2473
D707	ED-624903	D SILICON H 1S2473
D708	ED-624903	D SILICON H 1S2473
D709	ED-624903	D SILICON H 1S2473
D711	ED-624903	D SILICON H 1S2473
D712	ED-624903	D SILICON H 1S2473
D713	ED-624903	D SILICON H 1S2473
D714	ED-624903	D SILICON H 1S2473
D715	ED-624903	D SILICON H 1S2473
D716	ED-624903	D SILICON H 1S2473
D717	ED-624903	D SILICON H 1S2473
D718	ED-624903	D SILICON H 1S2473
D719	ED-624903	D SILICON H 1S2473
D720	ED-624903	D SILICON H 1S2473
D721	ED-624903	D SILICON H 1S2473
D722	ED-624903	D SILICON H 1S2473
D723	ED-624903	D SILICON H 1S2473
D724	ED-624903	D SILICON H 1S2473
D801	ED-511907	D SILICON 1N4002 100/1.0A
D802	ED-511907	D SILICON 1N4002 100/1.0A
D803	ED-511907	D SILICON 1N4002 100/1.0A
D804	ED-511907	D SILICON 1N4002 100/1.0A
D805	ED-511907	D SILICON 1N4002 100/1.0A
D806	ED-511907	D SILICON 1N4002 100/1.0A
FR501	ER-348272	R FUSE H S10 ERD2FC 1/4W 12R0G
FR802	ER-325381	R FUSE H RF25SJ 1/4W 2R2J
IC101	EI-735039K	IC KIA7325P
IC201	EI-735039K	IC KIA7325P
IC301	EI-717989	IC CXA1011P
IC401	EI-213390	IC NJM4558D
IC501	EI-381687J	IC UPC1330HA
J301	EJ-735017K	PIN J AP4-0032A
L501	EO-735043K	COIL TRAP ARP-004 105KHZ
L502	EO-735043K	COIL TRAP ARP-004 105KHZ
L503	EO-735042K	COIL OSC ARO-018 105KHZ
L601	EO-735044K	COIL MPX ARA-007 19KHZ
L602	EO-735044K	COIL MPX ARA-007 19KHZ
Q101	ET-728746K	TR KTC1815 GR
Q102	ET-728746K	TR KTC1815 GR
Q103	ET-728746K	TR KTC1815 GR
Q104	ET-728746K	TR KTC1815 GR
Q105	ET-728746K	TR KTC1815 GR
Q106	ET-728746K	TR KTC1815 GR
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Q203	ET-728746K	TR KTC1815 GR
Q204	ET-728746K	TR KTC1815 GR
Q301	ET-728746K	TR KTC1815 GR
Q302	ET-728746K	TR KTC1815 GR
Q303	ET-735023K	TR KTC2878 B
Q304	ET-735023K	TR KTC2878 B
Q401	ET-728746K	TR KTC1815 GR
Q402	ET-728746K	TR KTC1815 GR
Q403	ET-728746K	TR KTC1815 GR
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Q406	ET-728746K	TR KTC1815 GR
Q407	ET-728746K	TR KTC1815 GR
Q408	ET-728746K	TR KTC1815 GR
Q409	ET-728746K	TR KTC1815 GR
Q410	ET-728746K	TR KTC1815 GR
Q501	ET-726419K	TR KTC2120 Y
Q502	ET-728672K	TR KTA950 Y
Q503	ET-728746K	TR KTC1815 GR
Q504	ET-728672K	TR KTA950 Y
Q505	ET-728750K	TR KTA1015 GR
Q506	ET-728746K	TR KTC1815 GR
Q507	ET-728746K	TR KTC1815 GR
Q508	ET-728746K	TR KTC1815 GR
Q601	ET-728746K	TR KTC1815 GR
Q602	ET-728746K	TR KTC1815 GR
Q603	ET-728746K	TR KTC1815 GR
Q604	ET-728746K	TR KTC1815 GR
Q605	ET-728746K	TR KTC1815 GR
Q606	ET-728746K	TR KTC1815 GR
Q607	ET-728750K	TR KTA1015 GR
Q701	ET-728746K	TR KTC1815 GR
Q702	ET-728750K	TR KTA1015 GR
Q703	ET-728746K	TR KTC1815 GR
Q704	ET-728746K	TR KTC1815 GR
Q705	ET-728746K	TR KTC1815 GR
Q706	ET-728746K	TR KTC1815 GR
Q707	ET-728746K	TR KTC1815 GR
Q708	ET-728672K	TR KTA950 Y
Q709	ET-728672K	TR KTA950 Y
Q710	ET-728746K	TR KTC1815 GR
Q711	ET-728746K	TR KTC1815 GR
Q712	ET-728746K	TR KTC1815 GR
Q713	ET-728746K	TR KTC1815 GR
Q714	ET-728746K	TR KTC1815 GR
Q715	ET-728746K	TR KTC1815 GR
Q716	ET-728746K	TR KTC1815 GR
Q717	ET-728746K	TR KTC1815 GR
Q718	ET-728750K	TR KTA1015 GR
Q719	ET-728750K	TR KTA1015 GR
Q720	ET-728746K	TR KTC1815 GR
Q721	ET-728750K	TR KTA1015 GR
Q722	ET-728746K	TR KTC1815 GR
Q723	ET-728750K	TR KTA1015 GR
Q724	ET-728750K	TR KTA1015 GR
VR101	EV-358829	R S-FIX H RH0615C 0.10W 223
VR102	EV-358829	R S-FIX H RH0615C 0.10W 223
VR201	EV-358829	R S-FIX H RH0615C 0.10W 223
VR202	EV-358829	R S-FIX H RH0615C 0.10W 223
VR401	EV-358829	R S-FIX H RH0615C 0.10W 223
VR402	EV-358829	R S-FIX H RH0615C 0.10W 223
VR501	EV-357619	R S-FIX H RH0615C 0.10W 104
VR502	EV-357619	R S-FIX H RH0615C 0.10W 104
VR503	EV-358860	R S-FIX H RH0615C 0.10W 101
VR504	EV-358860	R S-FIX H RH0615C 0.10W 101
VR701	EV-356577	R S-FIX H RH0615C 0.10W 103
VR702	EV-355381	R S-FIX H RH0615C 0.10W 471
VR703	EV-356577	R S-FIX H RH0615C 0.10W 103
VR704	EV-355381	R S-FIX H RH0615C 0.10W 471

5. FRONT P.C BOARD

Ref.No.	Part No.	Description
D701	ED-735134K	D LED DLR-302T
D702	ED-735134K	D LED DLR-302T
D703	ED-735134K	D LED DLR-302T
D704	ED-735134K	D LED DLR-302T
D705	ED-735135K	D LED DLG-302T
D706	ED-735135K	D LED DLG-302T
D707	ED-735135K	D LED DLG-302T
D708	ED-735135K	D LED DLG-302T
D709	ED-735135K	D LED DLG-302T
D710	ED-735135K	D LED DLG-302T
D711	ED-735134K	D LED DLR-302T
D712	ED-735134K	D LED DLR-302T
D713	ED-735135K	D LED DLG-302T
D724	ED-624903	D SILICON H 1S2473
D725	ED-624903	D SILICON H 1S2473
D726	ED-624903	D SILICON H 1S2473
IC701	EI-735040K	IC KA2281
Q725	ET-728750K	TR KTA1015 GR
SW701	ES-735136K	SW PUSH 00220014 2C2P [DUBBING]
SW702	ES-735136K	SW PUSH 00220014 2C2P [DOLBY NR]
VR601	EV-735041K	VR ROTARY RK16K1240 20KAX2 [REC INPUT]
VR602	EV-735030K	VR ROTARY RK16K1180 200KB [BALANCE]

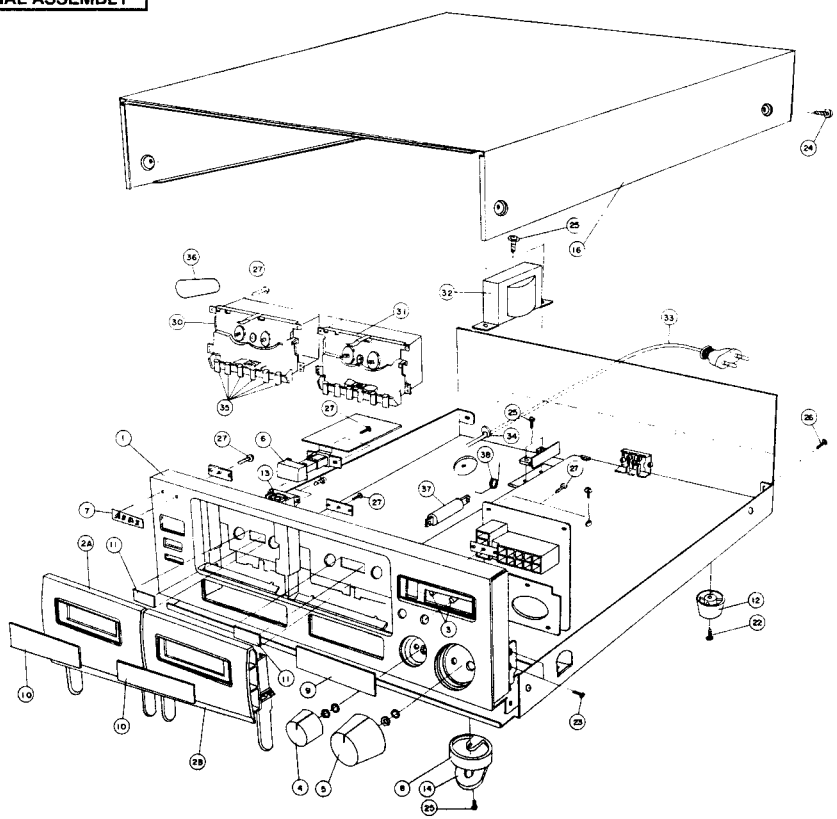
6. REGULATOR P.C BOARD

Ref.No.	Part No.	Description
IC801	EI-375441	IC NJM78M12A
IC802	EI-375441	IC NJM78M12A

7. POWER SW P.C BOARD

Ref.No.	Part No.	Description
SW801	*ES-735015K	SW PUSH SDL-1P [POWER SW]

FINAL ASSEMBLY



8. FINAL ASSEMBLY

Ref.No.	Part No.	Description
1	SP-735137K	PANEL FRONT HX-27W
2A	SC-735146K	DOOR CASSETTE (L)
2B	SC-735138K	DOOR CASSETTE (R)
3	SK-735092K	KNOB PUSH (R)
4	SK-735089K	KNOB ROUND
5	SK-735139K	KNOB REC
6	SK-735091K	KNOB POWER
7	MA-735101K	BADGE AKAI
8	SA-735126K	FOOT FRONT AT
9	SE-735140K	WINDOW LED
10	SE-735141K	WINDOW DOOR
11	SE-735142K	REFLECTOR
12	SA-735143K	FOOT-B
13	MC-735144K	COUNTER HX-27
14	SA-735096K	CUSHION FOOT
16	SP-735145K	COVER UPPER
22	ZS-352120	T2BR30X08STL BCM C080
24	ZS-322580	ST BID40X08STL BNI
25	ZS-490228	T2BID30X08STL CMT
26	ZS-331182	BT BID30X08STL BNI
27	ZS-523664	T2BR30X10STL CMT
30	BB-735037K	MECHA BLK TN-21ZSC-902(R/P)
31	BB-735038K	MECHA BLK TN-21ZSC-903 (P)
32A	*BT-735035K	TRANS POW A48-079Y-V HX-27W(E) [E]
32B	*BT-735036K	TRANS POW A48-079Z-B HX-27W(B) [B,S]
33A	*EW-347897	AC CORD 2 CORES VM0364.LCFL EV [E]
33B	*EW-346249	AC CORD 2 CORES LCFL2X0.75 B [B]
33C	*EW-347898	AC CORD 2 CORES VM-0436.LCFL S [S]
34	*EZ-692908	STRAIN RELIEF SR-5N-4
35	SK-735151K	KNOB DECK
36	MB-735154K	BELT COUNTER
37	MZ-735152K	DAMPER AIR
38	ZG-735153K	SP EJECT

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

ABBREVIATIONS (CASSETTE)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AC	Alternating Current	MIN	MINute
A/D	Analog/Digital	MML	Maximum Modulation Level
AF	Auto Fader	MOL	Maximum Output Level
AMP	AMPlifier	MPX	Multi PleX
AR	Anti Recording	NC	Not Connected (No Connection)
AT BIAS	Auto Turning BIAS	NFB	Negative Feed Back
ATT	ATTenuator	NORM	NORMal
BAL	BALance	NR	Noise Reduction
BEF	Band Elimination Filter	OSC	OSCiliator (OSCillation)
BSS	Blank Search System	P	Pulse
CAP M	CAPstan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMParator	QR	Quick Reverse
CONT	CONTinuance	R CH	Right CHannel
CRLP	Computer Recording Level Processing	REC	RECord (RECording)
CS	Chip Select	REV	REVerse
D/A	Digital/Analog	ROT	ROTation
DC	Direct Current	REW	REWind
DET	DETector	SEC	SECond
DISCRI	DISCRIminator	SELE	SELEctor
DUB	DUBbing	SENS	SENSitivity
EQ	EQualizer	SEPP	Single Ended Push Pull
FF (or F.FWD)	Fast Foward	SIG	SIGnal
FLD	FLuoresent Display	SPECT	SPECTrum
FREQ	FREQuency	STD	STanDard
FWD	ForWarD	SW	SWitch
GND	GrouND	SYSCON	SYStem CONtrol
H	High	TP	Test Point
HPF	High Pass Filter	TRIG	TRIGa
IND	INDicator	VCA	Voltage Control Attenuator
IPLS	Instant Program Location System	VOL	VOLume
L	Low	VOLT	VOLtage
L CH	Left CHannel	VR	Variable Resistor
LED	Light Emitining Diode	X'TAL	cysTAL
MEMO	MEMOry	X1	Normal speed
MICOM	MIcroCOMputer	X2	Dubble speed

AKAI

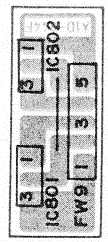
MODEL HX-27W

SCHEMATIC DIAGRAMS AND PC BOARDS

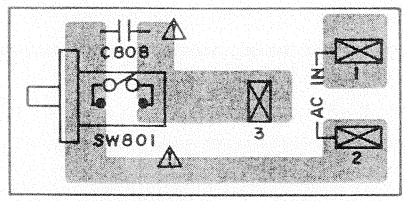
TABLE OF CONTENTS

1. BLOCK DIAGRAM 3
2. SCHEMATIC DIAGRAM 4
3. MAIN PC BOARD 5
4. POWER AND OTHER PC BOARDS 6

Use the following schematic diagrams and PC boards together with the provided service manual.



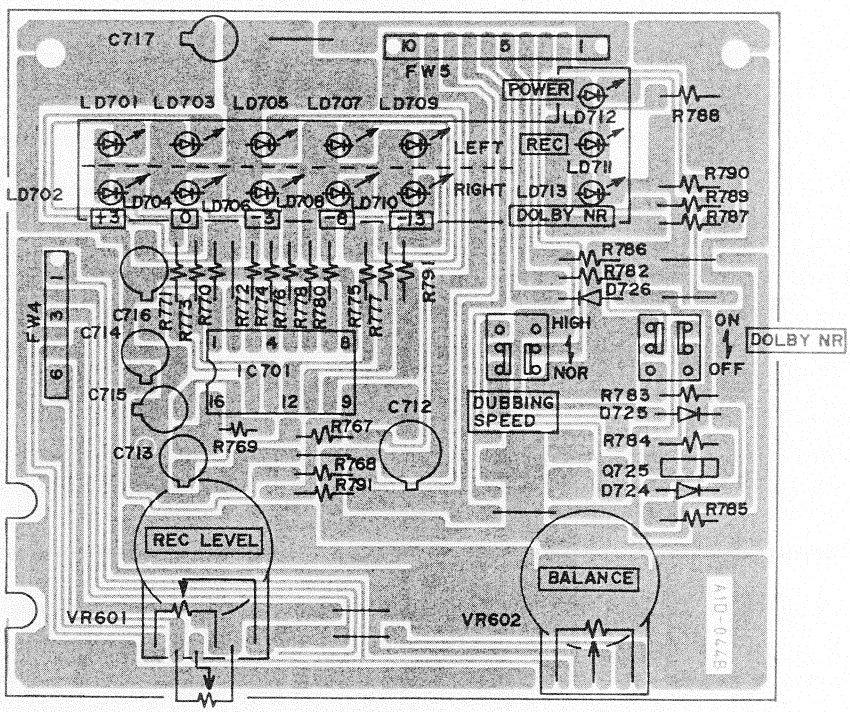
REGULATOR PCB
AID-044F



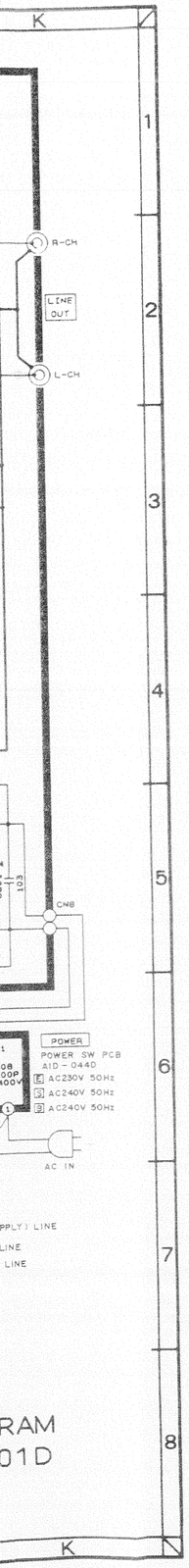
WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

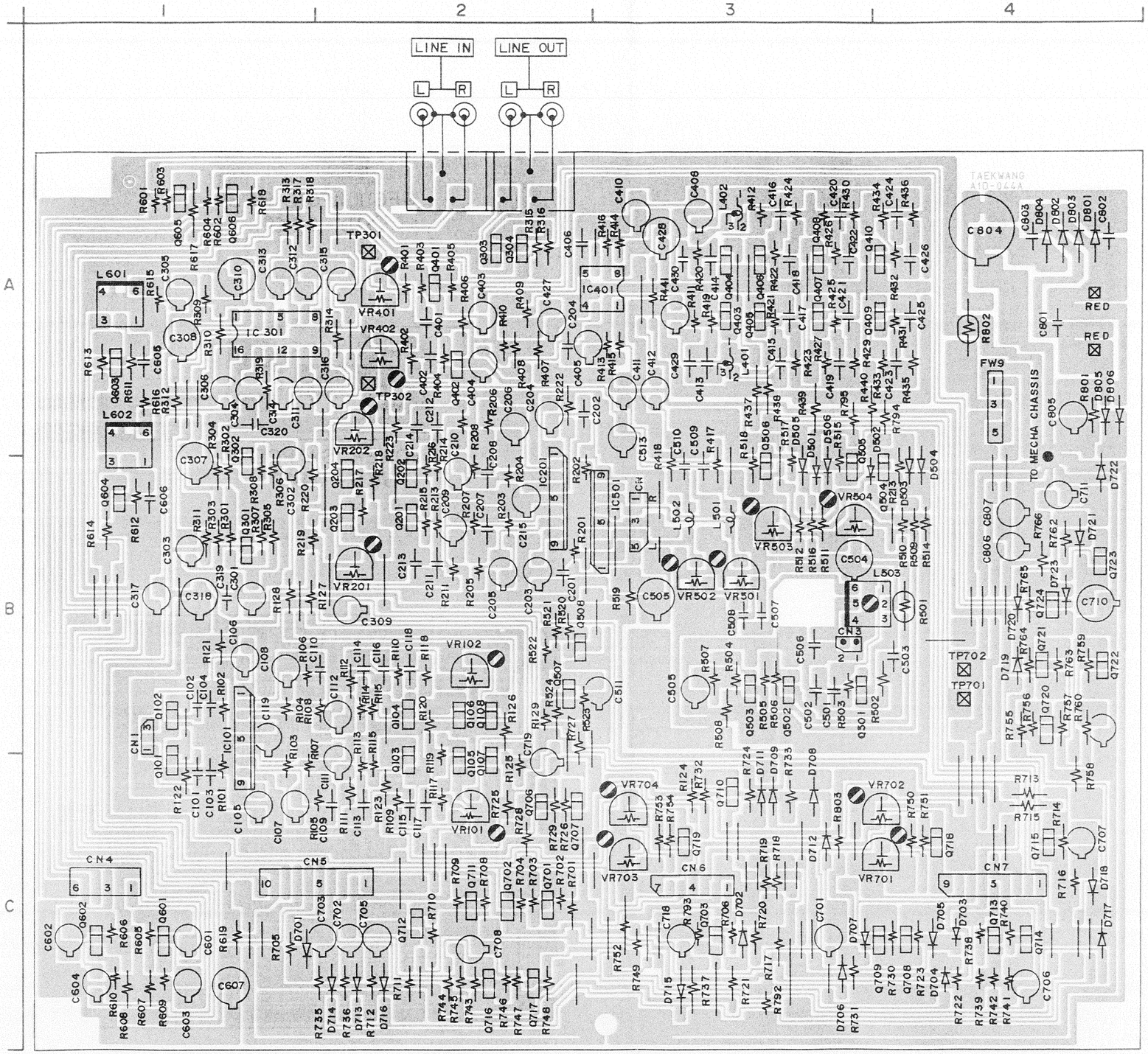
AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

POWER SW PCB
AID-044D



FRONT PCB AID-044B





MAIN PCB AID-044A

PRINCIPAL PARTS LOCATION

ICS

IC101	B,C1
IC201	B2
IC301	A1
IC401	A3
IC501	B3

CONNECTORS

CN1	B1
CN2	B3
CN3	B3
CN4	C1
CN5	C1,2
CN6	C3
CN7	C4

WIRE

FW9	A4

TRANSISTORS

Q101	C1
Q102	B1
Q103	C2
Q104	B2
Q105	C2
Q106	B2
Q107	C2
Q108	B2
Q201	B2
Q202	B2
Q203	B2
Q204	B2
Q301	B1
Q302	A,B1
Q303	A2
Q304	A2
Q401	A2
Q402	A2
Q403	A3
Q404	A3
Q405	A3
Q406	A3
Q407	A3
Q408	A3
Q409	A4
Q410	A4
Q501	B3
Q502	B3
Q503	B3
Q504	B4
Q505	B3
Q506	B3
Q507	B2
Q508	B2
Q601	C1
Q602	C1
Q603	A1
Q604	B1
Q605	A1
Q606	A1
Q701	C2
Q702	C2
Q703	C3
Q704	C3
Q705	C3
Q706	C2
Q707	C2
Q708	C4
Q709	C4
Q710	C3
Q711	C2
Q712	C2
Q713	C4
Q714	C4
Q715	C4
Q716	C2
Q717	C2
Q718	C4
Q719	C3
Q720	B4
Q721	B4

MAIN PCB AID - 044A

DECK MECHA (R/P): TM-21ZSC-902
(P): TM-21ZSC-903

KTC1815GR: Q101-108, 201-204, 301, 302, 401-410, 503, 506-508, 601-606, 701, 723-727, 710-717, 720, 722.

KTA1015GR: Q505, 702, 718, 719, 721, 723-725, 807

KTC2120Y: Q501

KTA950Y: Q502, 504, 709, 708.

KTC2878: Q303, 304.

1SS273: D501-503, D701-727

1N4001: D801-806.

DL6302T: LD701-704, 711-712 (RED).

DL6302T: LD705-710, 713 (GREEN).

L401, 402: (1-2) 8.2uH, (1-3) 19uH, (ABK-009)

L501, 502: 105KHz TRAP (ARP-004).

L503: 105KHz OSC COIL (ARO-018).

L601, 602: 15KHz, MPX COIL (ARA-007).

SW701, 702: 00220014.

SW801: SDL1P

TRNS: (S) A48-0792-B.
(B) A48-0792-B.
(E) A48-0791-D

TP301, 302: DOLBY LEVEL TEST (245mV)

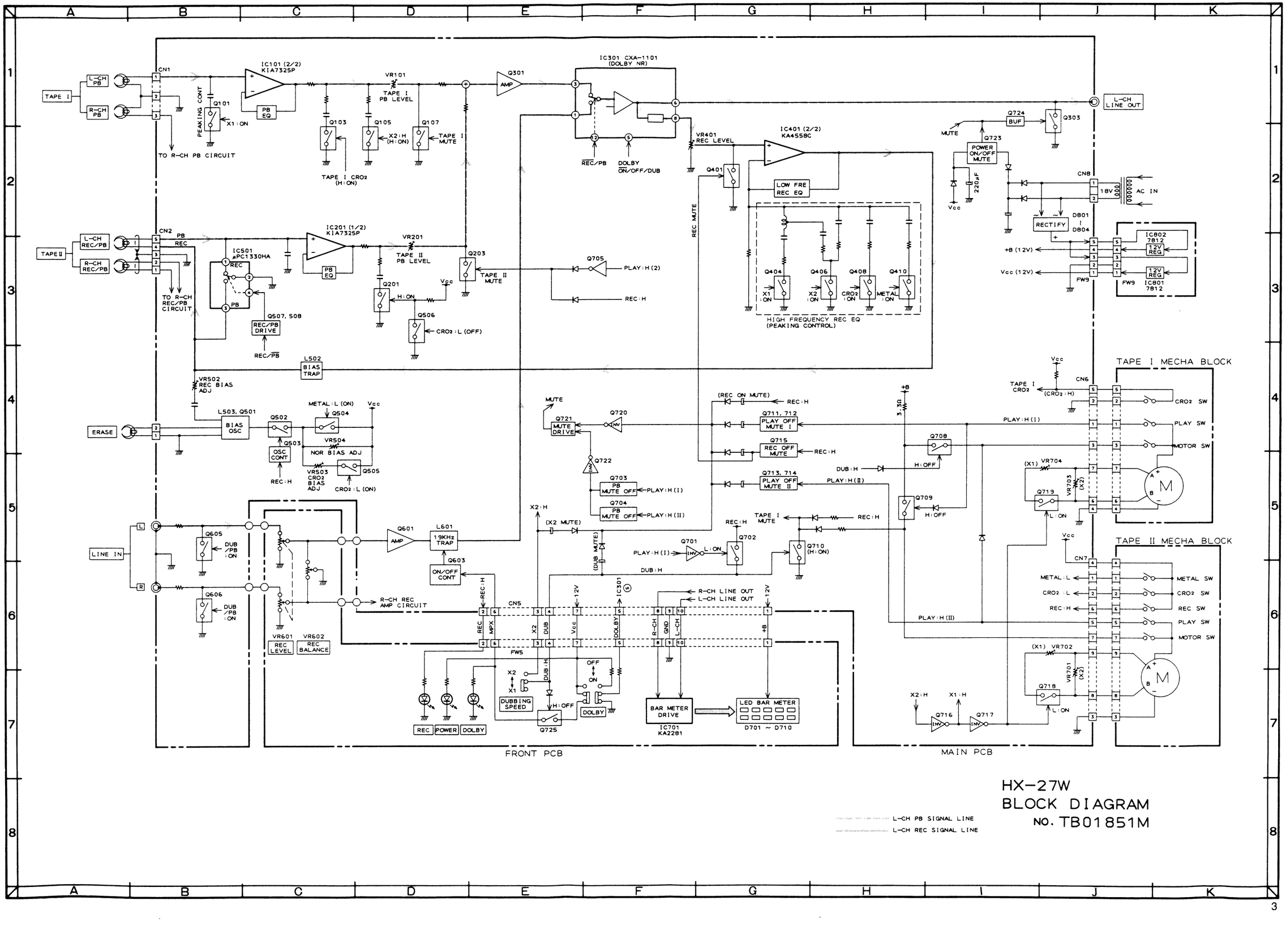
TP701, 702: HI SPEED TEST (5000Hz)

(WARNING)
⚠ INDICATED SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

(NOTE)
ALL RESISTORS IN OHMS 1/4, 1/5W (J)
NOTED 2K7: 2.7K OHMS
4K7: 4.7K OHMS
2R2: 2.2 OHMS
INDICATED NOTED CAPACITY μF/V UNLESS OTHERWISE.
NOTED 561: 560PF
562: 0.0056μF
563: 0.056μF

B (POWER SUPPLY) LINE
PB SIGNAL LINE
REC SIGNAL LINE

HX-27W
SCHEMATIC DIAGRAM
NO. TB01801D



HX-27W
BLOCK DIAGRAM
NO. TB01851M